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THEATRES & OTHER REMAINS
IN
CRETE



BY
EDWARD FALKENER.



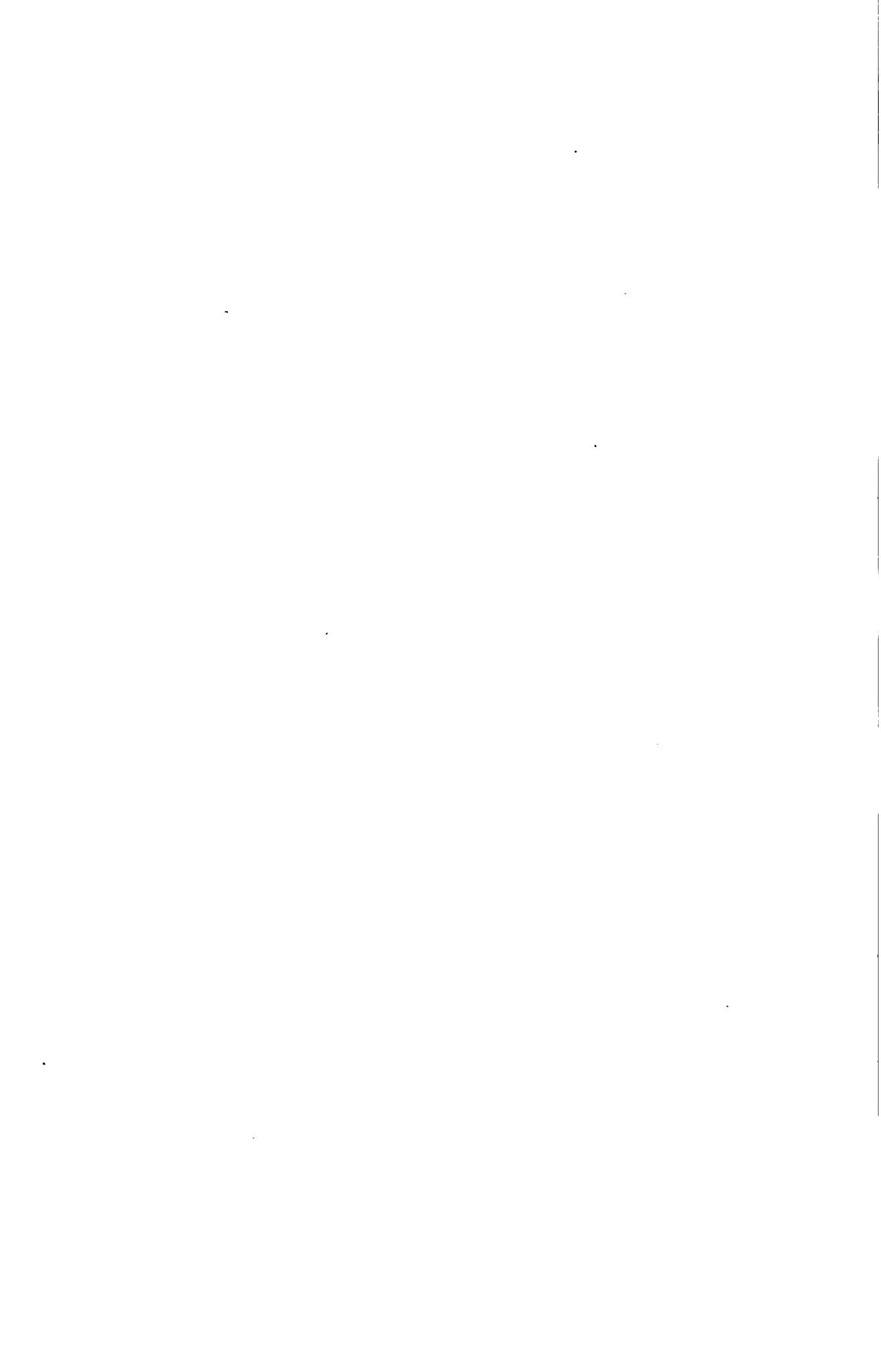


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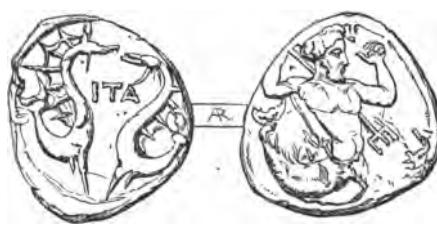
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A DESCRIPTION
OF SOME IMPORTANT
THEATRES AND OTHER REMAINS
IN
CRETE,
FROM A MS. HISTORY OF CANDIA BY ONORIO BELLI
IN 1586.
BEING A
Supplement
TO THE
“MUSEUM OF CLASSICAL ANTIQUITIES.”
BY
EDWARD FALKENER.



LONDON:
TRÜBNER & Co., 12, PATERNOSTER ROW.

MDCCCLIV.

ABBREVIATIONS.

(Lett. I.) A Letter from Onorio Belli to his Uncle, (Valerio Barbarano?) dated 24 April 1586. (Old style.)

(Lett. II.) A Letter from Onorio Belli to his Uncle, dated 11 Oct. 1586. (Old style.)

These letters are now preserved in the Ambrosian Library at Milan.

(A. Z.) Abstract of Honorio Belli's History of Candia, written by Apostolo Zeno, (1608-1750,) and now preserved in St. Mark's Library at Venice, among the secret Codices.

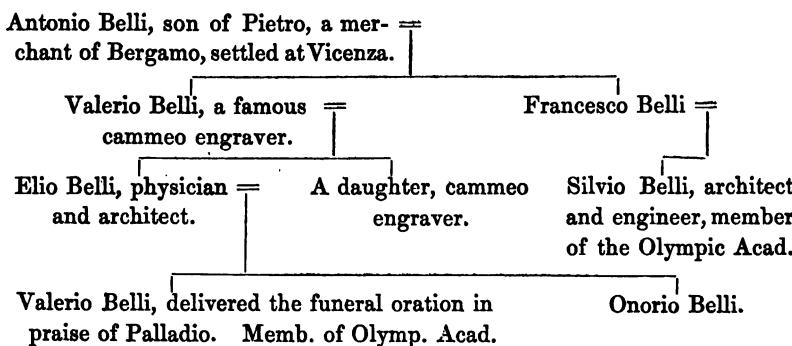
(M.) Extract from Belli's History, published by Maffei in his History of Verona.

Two copies of the Plans are in the Ambrosiana, and a copy of the Inscriptions exists in the Ambrosiana, (Cod. D. 199,) and another is contained in Apostolo Zeno's Abstract, in the Marciana. Most of them have been already published by Boeckh, in his *Corpus Inscriptionum Græcarum*, from the copies forwarded by Belli to Pigafetta. (See p. 273.) The copies in the Ambrosiana are, however, more exact.



10/77

IN a former article on the antiquities of Crete,* I published a translation from an Italian MS. of the sixteenth century, entitled "La Descrizione dell' Isola di Candia," containing a general description of the antiquities of the island; accompanied with a table of the ancient Itineraries, and a map of Crete, constructed from these authorities, and corrected from the hydrographical survey taken by order of the Admiralty. I now propose to lay before the reader extracts from another MS. of the sixteenth century, written by Onorio Belli, which treats more particularly of some of the best preserved and more important antiquities. The author of the MS., extracts from which are here translated, *Onorio Belli*, was descended from a family of artists, many of the members of which are also distinguished in the annals of literature.



* *Museum of Classical Antiquities*, No. VII. 8vo. Richards, Sept., 1852. The coins in the title-page and tail-piece should have appeared in that number, but were omitted unintentionally.

Onorio Belli exercised, for many years, in his native city, the profession of his father. In 1579 he was elected a member of the Olympic Academy. In the following year he was entrusted by that body with an interlude, in the representation, at the Olympic theatre, of the *Œdipus* of Sophocles.* On the new theatre being completed shortly afterwards, a statue to his honour was placed among the other ornaments of the scene. In 1583 he was appointed physician to the Proveditor General of Candia, Luigi di Antonio Grimani dei Servi, and left Vicenza on the 31st day of March. Grimani finding the country in a state of great disorder, determined to re-establish it, if possible, by making a personal tour of the whole island ; and Belli had thus an ample opportunity to write a particular description of the whole province, and to investigate its antiquities. He even persuaded Grimani to undertake excavations among the ruins of the principal cities, and the success which attended them amply compensated their labours ; for not only did they find statues, but many inscriptions were dug up, several of which indicated the names of ancient cities, the sites of which were previously unknown. Grimani, having re-established order, returned to Venice, leaving Belli behind him, at the urgent request of the inhabitants of Canèa, as physician to that city. In this capacity, and in the enjoyment of a handsome salary, he continued for some years, during the leisure of which time he prosecuted his work ; but owing to constant occupations "it was not till last summer (1596)—when I had a little respite—that I was enabled to bring to completion that which I had commenced so long before : in doing which I have been obliged, by various causes, to set aside the general design, and many particulars connected with the island, leaving out the subdivision of territory, with the boundaries of the different districts and castles, and some other points which I considered necessary

* Angiogabriello di Santa Maria, *Bibl. e Stor. dei scrittori di Vicenza.* 4to. Vic., 1778.

to be known relative to the chorography of the island; all of which I had been anxious to treat of in order to render the subject more complete. But, having no assistance, I have finished the work as well as I could, under the circumstances."

(A. Z.)

But Belli not only distinguished himself as a physician and an antiquary; he was celebrated also as a botanist. Several of his letters on this subject are extant, most of which relate to the isle of Candia, and some of them are published. His industry and perseverance are shown by the motto which he selected as his device. It was a puzzle-lock, with the words "Sorte aut Labore," intimating that he was determined to succeed, if not by genius at least by study and assiduity.*

How long he remained in the island is uncertain, Cæsar Campana, in a letter to Giuseppe Aquila, says ten years, but we know him to have been still living at Canèa in 1596. His death took place in 1604.

In addition to the accompanying extracts of his work on Candia, the following writings are preserved in the *Ambrosiana*:

I. *Epistole aliquot ad Carolum Clusium de variis stirpibus agentes.* These are published in the

"Historia Plantarum" of Clusius, fol., Ant., 1601, and referred to by Vander Linden, and by James in the Bodleiana. Some of the more remarkable of these plants have been published by Francesco Pona in his "Descriptione delle Piante di Monte Baldo," Basle, 1608; and by John Ray in his "Sylloge stirpium Europearum," Lond., 1694.

II. *Two Letters to his Uncle* (Valerio Barbarano?), describing the antiquities of the island, and dated 24 April and 11 Oct. 1586, (old style.) The principal contents of these letters are given in the present article, and distinguished by the references (Lett. I. and II.) They have been printed at length by Magrini, *Scritture inedite in Materia di Architettura*, 8vo., Pad., 1847, in accordance with a very pretty custom in Italy, of printing an edition of a poet, or some other valuable work, in commemoration of a marriage or other festal occasion. In the present instance the pamphlet is printed "Per le nozze Antonio Dr. Zanella e Laura Tura." The original letters are preserved in Cod. Q. 122; the

* Ferro, *Teatro d'Imprese*, ii. 456.

plans referred to are in S. 84; other copies of the drawings are in D. 138, pt. inf., formerly D. 321, which were sent by Belli to G. V. Pinelli. The inscriptions are contained in D. 199, pte. inf.

- III. A letter, *De Græcorum Miseria*, addressed to Jacopo Zuingero. (Cod. Q. 115.)
- IV. Letter to the *Collegio di Medici di Vicenza*.
- V. Letter to Alfonso Ragona on a *Tremuoto seguito nell' Isola di Candia*. (Cod. R. 122.)
- VI. Letter on the Efficacy of certain medicinal herbs. (R. 99.)
- VII. Letters written in 1596, *De Absynthio et Phalangis: de Theriaca, fructu Abavo, Ossar, Sofera, Nardo Cretica herba, Cicorea spinosa*, etc. (Q. 122.)
- VIII. Letter to Carlo Clusio, dated 15 Feb. 1596, *De Fructibus, Plantis, ac Seminibus quibusdam peregrinisi*. (R. 94.)
- IX. *A table of longitudes and latitudes of the island*, with a comparison of those of Ptolemy; with the ancient and modern names. (D. 195.) And
- X. The following *Letter on the climate, etc., of Candia*. (Cod. D. 195.)

“*Al M. Mag^o et Rev^{do} Monsignor Paulo Gualdo,
mio Sig^r osservandissimo.*

“I have not been able to reply earlier to the letter of *Vost. Sig. Rev.*, dated 26th of June, in consequence of having received it only in September, and no sailing packets having left here since then.

“I am delighted to hear that some of the plants I sent you have struck, nor should you be surprised at their not doing so, the temperature of this country being very different from that of Vicenza: for here, from the end of March till the middle of October, it never rains, excepting occasionally in the month of August, in which case the vines are ruined by the intense heat which follows. In the winter, on the contrary, there is heavy rain, with thunder-storms.* The snow never lies on the plains, though it covers the mountains continuously; neither is there any ice, nor indeed do the people know what it is. It is never cold, unless there is a north wind, which generally lasts eight or ten days, after which it becomes warm again. The fields are green throughout the winter, and covered with spring roses and other flowers in great profusion. In summer the sun is hot, but within doors one does not feel it, there being continual breezes from the west, north-west, and north, which refresh the land wonderfully. The nights are very cool, and one sleeps tranquilly, without being annoyed by the intense heat as in Vicenza. But if by chance the south wind

* These rains frequently cause inundations, particularly on the western part of the island, the waters being shut in on every side by the mountains. (Cod. vi. in the preceding essay.)

blows, it ruins everything, for it burns like fire, and one is obliged to remain at home with the shutters closed ; and since I have been in the island, I have felt it more than once in a manner of which you can form no conception. When this wind blows it is as hot in winter as in summer, as was the case last January, when we had a July-heat for fifteen days and nights continuously ; so that it is no wonder that plants indigenous to this island cannot live in Vicenza, where there is such a diversity of climate. Nevertheless I send to my uncle, *Messer Valerio*,* many seeds, of which *Vost. Sig. Rev.* may take your share ; and you will do me a kindness in letting me know what plants strike, and what do not. I have not yet found any bulbous roots, except of well known species, but *Messer Silverio* and I intend to take a tour among these rugged mountains, and if we find anything remarkable, as I hope we shall, I will not fail to acquaint *V. S. R.*, to whom I earnestly recommend myself, and pray you to salute (bacciar lo mano) in my name, the Rev. Sig. your uncle, and your excellent brother.

“ Canea, 9 Oct. 1586 (*old style*)

di Vos. Sig. Rev.

most affectionate servant,

HONORIO DE BELLi.”

History of Candia.

The title of Belli's work is recorded by Calvus, *Bibl. et Stor. Vicent.*, tom. iv., the translation of which, in Latin, is as follows :

HONORII BELLi MEDICI VICENTINI RERUM
CRETICARUM OBSERVATIONES VARLÆ,
CONTINENTES DIVERSOS ACTUS, ÆDIFICIA,
INSCRIPTIONES, etc.

The *Dedicatory Epistle* was addressed to Alfonso Ragona, “nobile Vicentino, e con-Academico Olympico,” and was dated Canea, 1 October 1596.†

* Valerio Barbarano : a list of the seeds received by whom exists in the same codex.

† Though the work was not finally completed till 1596, the portion relating to the antiquities of the island was written in 1586, as is evident by the letters in the *Ambrosiana*, and by the plans of the same date ; and in his first letter he writes,—“though from my divers occupations I have not been able to finish the work, I trust that I shall be enabled to do so during the idle hours of this summer.”

Then follows a *list of authors* consulted: after which is

The Preface: in which he excuses himself for having recounted several fables in the beginning of his work.

It commenced with the words—"Fu costume non solo degli antichi paesi, et degli historici," etc. After this is

A General Description of the Island of Crete, beginning with these words—"La isola di Candia fu anticamente chiamata Aeria," etc. In the first part is described the position of the island, its mountains, antiquities, rivers, and principal promontories. He corrects the table of Ptolemy's longitudes and latitudes, and he confronts the ancient with the modern names: he recounts the history of its fabulous inhabitants, who were accounted gods and heroes by the ancient Gentiles; he gives the lives of those of its more recent natives whose names are rendered famous by history, he depicts the laws and customs of the country, he describes the present condition of the towns and inhabitants, pointing out the situation and state of preservation of the ruins of the ancient cities, and accompanying the work with plans and drawings of the more remarkable places and monuments, together with many Greek inscriptions recently discovered.

In the second book he treats of the ancient and modern wars, down to the period when the island fell into the possession of the Serene Republic; he furnishes a list of the colonies of noble Venetians sent there, the rebellions which followed, the garrisons appointed by the Republic, and gives account of the various particulars of antiquity and interest throughout the country.

(A. Z.)

Two copies of this work are known to have existed: one was in the possession of the Padre Carlo Lodoli, Minore Osservante of Venice;* the other, an imperfect copy, was held by Jacopo Filipo Tomasini, bishop of Città Nuova.† The work is spoken

* Maffei, *Degli Anfiteatri*, p. 67. Mazzuchelli (Conte Giammaria), *Gli Scrittori d'Italia*, voce *Belli*.

† Tomasini, *Bibl. Patav. MSS.*, p. 129.

of by all writers as being of the highest merit, which concurrent testimony causes us more deeply to deplore its loss.

Pigafetta, in 1612, says "it is written with great diligence and research, and with considerable knowledge of geography, antiquity, and architecture."*

Maffei calls it a most precious manuscript, and says, "it is written with judgment and learning, and we have no work on this island in any way approaching to it. In the first book, which treats of the antiquities, there is a collection of inscriptions, and the author, endued with an intimate knowledge of the principles of architecture, gives the plans of all the most ancient edifices then inedited, and some of which were destroyed for various purposes during the residence of the author. Among these are seven theatres, of which he found considerable remains among the ruins of the various cities; he also refers to five amphitheatres, the remains of which he appears to have discovered, two of which, those of Gortyna and Hierapytna, he measured, and of these he has given us plans, though, in accordance with the practice of those times, he has restored them as if perfect."†

Bocchi, in like manner, calls it "a precious MS. on the history of Candia, compiled, with great diligence, by Onorio Belli, which we hope may shortly see the light. Among the various drawings of remarkable edifices which it contains, are some of theatres. All these, according to the custom of the nation, have the orchestra very large, but none so large as that of Adria (described by Bocchi), which shows the great difference between the Etruscan and Greek theatres, and again between the Greek and the Roman."‡

Marco Velsero, writing to Pignoria, thus speaks of it: "Oh,

* Pigafetta (Filippo), *Teatro del mondo, di Abrahamo Oratio*. Fol. Anversa, 1612. *Voce Candia*.

† Maffei, *De gli Anfiteatri*, 8vo., Ver., 1731, p. 67.

‡ Bocchi (Ottavio), *Osservazioni sopra un antico teatro in Adria*, 4to., Ven., 1739, p. xiii.

how this description of ancient and modern Candia, written by Sig. Belli, physician and botanist, full of drawings of ancient buildings and Greek inscriptions, makes my mouth water ! Is it possible that in Italy, and particularly in Venice, which has such relations with that island, good taste should so far have perished that sufficient funds cannot be raised to defray the expense of publication of a work of so much merit and learning !” *

We are in some measure consoled for this loss by finding, in the *Ambrosiana*, some of his letters addressed by him to his friends in Vicenza, recounting to them some of the discoveries he had made ; which letters not only contained pretty full accounts, but enclosed plans of the more perfect of the monuments, and copies of several of the inscriptions ; and by finding in the *Marciana* an abstract at some length, drawn up by Apostolo Zeno,† which in the following paper is made to tie-in with the Ambrosian documents, and the extracts from which are designated by the signature (A. Z.)

* Baglioni, *Lettere d’Huomini illustri del secolo XVII.* Venez. 1744, p. 129.

† Apostolo Zeno, a well known ecclesiastic of Venice, was born in 1608, and died in 1750. The MS. is wretchedly written, on an inferior description of paper. The following is the order of places given, which will be found to be from west to east :—Cydonia, Elyros, Cisamus, Aptera (Polyrhenia,) Minoa (Aptera,) Rhythymna, Lappa, Oaxus, Candia, Dia, Gnossus, Gortyna, Matalia, Lyttus, Chersonesus, Histriona, Minoa, and Hierapytna.

THE ANTIQUITIES OF CANDIA.

HIERAPYTNA.



ABOUT forty miles west of *C. Salomon*, on the south coast, are the remains of the noble city of Hierapytna. The city was formerly called Cyrba, then Pydna, then Camiro, and lastly Hierapytna; the modern name is *Gerapetra*. It appears to have been built in the manner of Alexandria, having opposite to it a small island connected with the city by a mole, formed of a wall twenty feet in thickness, and serving as a gabion battery to a beautiful and commodious harbour.

Hierapytna contained a naumachia, an amphitheatre, two theatres, temples, thermæ, and aqueducts. The modern city was ruined by a dreadful earthquake in 1508, which is described by Girolamo Donato, Duke of Candia; the translation of whose letter I will give when I come to speak of the earthquakes which have happened to this island.* Since that event the city has been reduced to a small castle with a hamlet.

(A. Z.)

* In Cod. R. 122 of the *Ambrosiana* is a letter directed to Alfonso Ragona, on a "Tremuoto seguito nell' Isola di Candia." Not having taken a note of it I do not recollect whether it relates to that of 1508, described by Donato, or to the subsequent one witnessed by Belli himself in 1595. Candia is peculiarly subject to these awful visitations. Earthquakes, many of which were very fatal, are recorded to have taken place in 1303, 1311, 1416, 1490, 1508, and 1595. See Torres, *Antiquitates Cret.* cap. xv. p. 126-7.

The following inscriptions were copied by Belli among the ruins.*

(See Boeckh's *Corpus Inscr. Gr.* Nos. 2565, 2564, and 2602.)

The following is unpublished:—

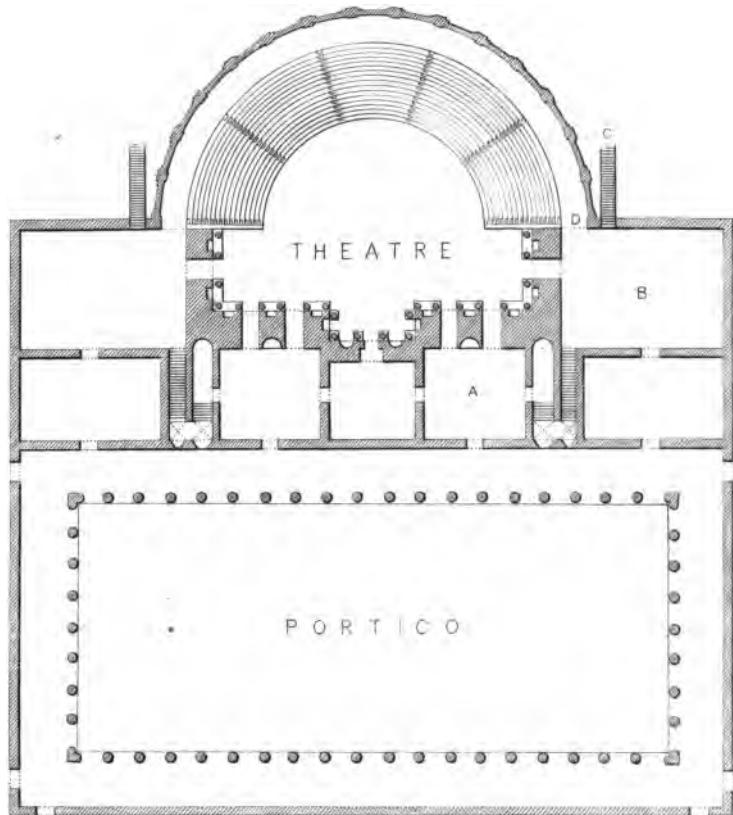
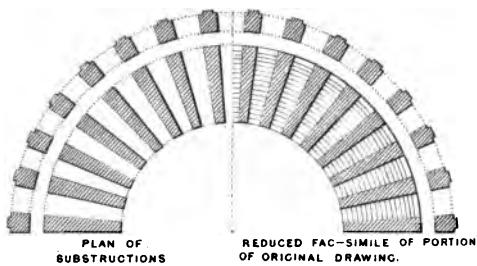
ΓΕΤ . . . Α
ΣΑΡΜΑ . . .
Δ . ΦΔΑΟΥ
ΣΟΥΛΠΙΚ

The Smaller Theatre.

The theatres of Hierapytna are highly remarkable from the peculiarity of their design. The smaller theatre, of which many of the seats remain, measuring two feet in width, was adorned with two orders of columns of the whitest marble, five quarters in diameter, (17 inches Eng.) of the Ionic order. The capitals and entablatures were of the most exquisite workmanship, many of which have been sent to Venice by His Excellency. (The Proveditor-General.) The statues (of the scene) were of stucco: these I found entire on excavating a trench along the front, but in endeavouring to remove them they fell to powder. Most of the columns have been destroyed by fire. Those of the lower order were ten feet high. (11 feet 4 in. Eng.) The columns of the upper order were one foot in diameter and nine feet in height. The columns of the portico behind the scene corresponded in size to those of the lower order, but they are of granite, (pietra dura,) like the two columns at Venice.† These columns, which are so numerous here and at Gortyna, must have been brought from Egypt, for there is no stone of this description in the island of Candia: indeed the building stone is very indifferent, being even softer than that of Soizzo and Creazzo. Many of the seats of the theatre remain in place: they measure two Vicentine feet in width.

* Among other remains are described by Cyriacus Pizzicolius Ancon. two statues, on the pedestals of which were the following inscriptions. (Cod. No. 5237, *Bibl. Vat.*) See Boeckh, *C. I.* Nos. 2581 and 2582.

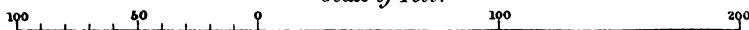
† In front of S. Mark's (?).



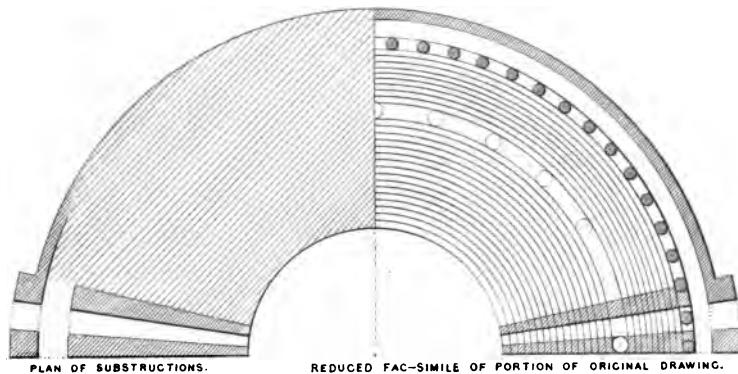
PLAN OF THE SMALLER THEATRE AT HIERAPYTNÄ.

FROM AN ORIGINAL DRAWING BY ONORIO BELLI, 1582---1596.

Scale of Feet.

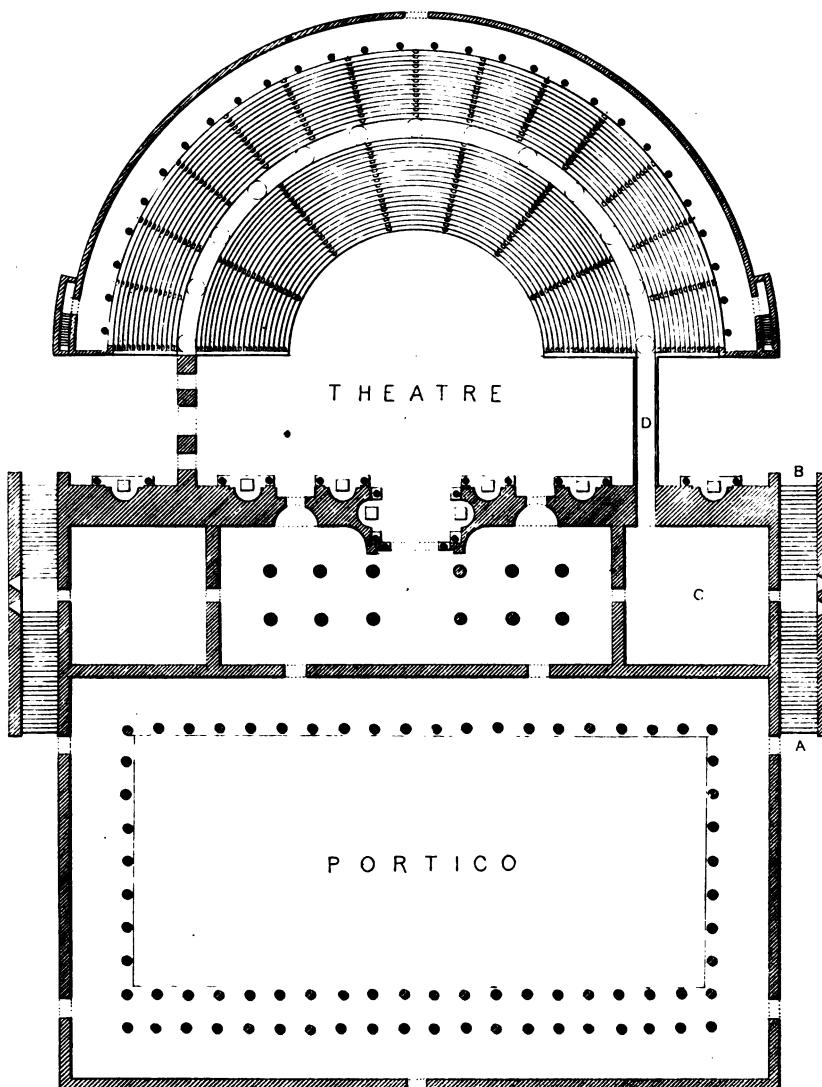






PLAN OF SUBSTRUCTIONS.

REDUCED FAC-SIMILE OF PORTION OF ORIGINAL DRAWING.

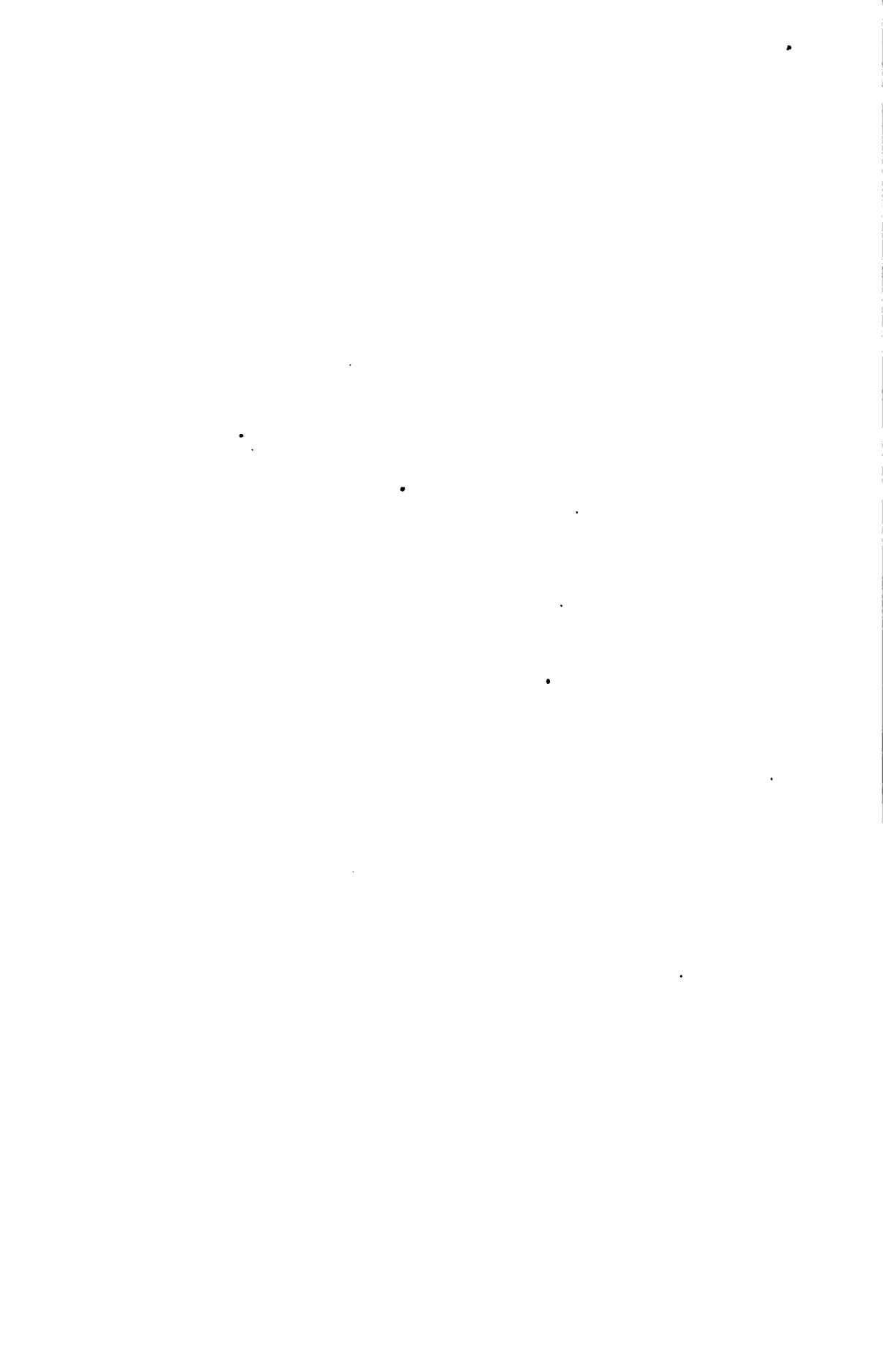


PLAN OF THE LARGER THEATRE AT HIERAPYTNNA.

FROM AN ORIGINAL DRAWING BY ONORIO BELLi, 1582--1596.

Scale of Feet.

100 50 0 100 200



Among the ruins of the theatre are some inscriptions, of which, though much mutilated, I send you copies, hoping that you will be able to get them translated for me, and to forward them to me here; for, as you know, I am not sufficiently acquainted with the language to interpret them myself. (Lett. I.)

The Greater Theatre.

The great theatre was partly excavated out of the mountain. The scene was of white marble, relieved in parts with red-marked stone, similar to that of Verona. It was most richly decorated with columns, cornices, and other ornaments; now, alas, a heap of ruins. The order was Ionic, which was the favorite order in these parts. The capitals are of the most beautiful design and wonderful execution, and indeed all the architectural members are carved with the greatest care. Where the Corinthian order is employed the capitals are far from possessing the beauty of those designed by Palladio: nor are the Doric columns to be compared with those of the Basilica at Vicenza.

You will pay particular attention to the arrangement of the scene in these two theatres of Hieraptyna, which depart further from the directions of Vitruvius than any other theatres which I have seen, and probably from any that have been seen by others: but the parts behind the scene, including the hospitalia, are generally disposed according to the usual principle. The theatre had at least one row of bronze *echeia*, the cells for which are very visible, and indeed the best preserved of any of these theatres. The ignorant inhabitants of the island, who do not know what a theatre was, call these cells *ovens*. (Lett. II.)

The following inscriptions were found "in the theatre":—

ΑΙΑΘΗΙΥΧΙ
Α . ΦΛΑΟΥΙΟ
ΣΩΛΠΙΚΙΑΝΟΥ
ΥΙΟΝΑΦΛΑΟΥΙΟ
ΔΩΡΙΩΝΟΣΤ
ΚΑΙΑΝΤΙΣΤΡΑ
ΒΕΙΘΥΝΙΑΚ

The two others are already published. See Boeckh, Nos. 2585 and 2661.

Amphitheatre.

(A plan of this building was given in Belli's work, but is now lost.)

The amphitheatre was dug between two little hills or rocks ; and in order to complete the oval, six buttresses of solid masonry, without any decoration, were built at each extremity. Between these were the stairs.* (M.)

MINOA.

At a distance of eighteen miles from *Settia*, towards the east,† at a place called *Paleocastro*, are the ruins of Minoa. The situation of the city is very fine. The town was placed partly on a hill, and partly in the plain ; but it is now quite deserted, from fear of corsairs. (A. Z.)

* Maffei, who quotes this from Belli's MS., which he saw when in the possession of the Padre Ladoli, appends the following remark :—“ What may be believed from all this I know not, nor for what purpose such a building was designed ; and yet so great a deference would I pay to the judgment of this learned man, as to grant that it might not be impossible but that a kind of amphitheatre might have been erected even in a Greek city, in order to gratify some Roman governor or another ; though I own it was contrary to the Grecian usage. Nor indeed does it militate against my general argument, which I conceive to be the general and proper custom of the Grecians. But Belli found greater remains of magnificent buildings among the ruins of this city than in any other place.” (Gortyna excepted.) Gorton, *History of Amphitheatres*, p. 82.

Maffei seems not to have considered that though these structures did not exist in Greek cities, they might have been introduced subsequently to the Roman conquest of those countries. Thus, we find amphitheatres at Pergamus and some few other cities of Asia Minor.

† “ Camminando per *levante*.” If this word be correct, the place which Belli is describing is not Minoa, but the Palæocastron on the eastern coast, near to Itanus : but by his naming Minoa after Hierapytna, it seems more probable that he really meant Minoa, the situation of which was fixed, even in his time, and therefore that the word “ *levante* ” should read *ponente*.

The difficulty is further increased by his describing the adjoining city Istrona as being six miles still further to the *east*.

See the map of Ancient Crete, in the former part of this paper, *Mus. of Class. Antiq.*, No. VII.

ISTRONA.

Six miles further to the east* is the city of Istrona, on the mouth of a river of the same name, but now called *Noyaona*. The city is at present entirely submerged by the sea. Dioscorides states that the odoriferous Aspalathum grew here, but Belli was unable to find it. (A. Z.)

Mirabello.

Belli notices another city, which he supposed to be Cytaeum, overwhelmed by the sea in like manner,† at a place not far from *Castel Mirabello*. (A. Z.)

CHERSONESUS.



At twelve miles NNE. from Lyttus, on the sea coast, are the remains of Chersonesus, now called *Chironisso*. There are the vestiges of a small theatre, and of a small amphitheatre. At some distance from these is an aqueduct, but it is now in ruin.‡ (A. Z.)

* See the preceding note.

† In reference to this submerging of the eastern extremity of the island, it is very remarkable that Capt. Spratt, in a letter read before the Geog. Soc. this session, and about to be published in their *Transactions*, describes the up-heaving of all the western coast; and mentions particularly Cisamus, Phalasarna, Poecillassus, and Suia, at some of which places he discovered the ancient ports now standing on dry land, twenty to thirty feet above the level of the sea.

‡ Torres, referring to Belli's MS., mentions the walls of the city as being also in a state of partial preservation. *Antiq. Creten.*, xxi. 243.

From these walls and the position of the city, it is sometimes called *Altamura*. (Bondelmonte.)

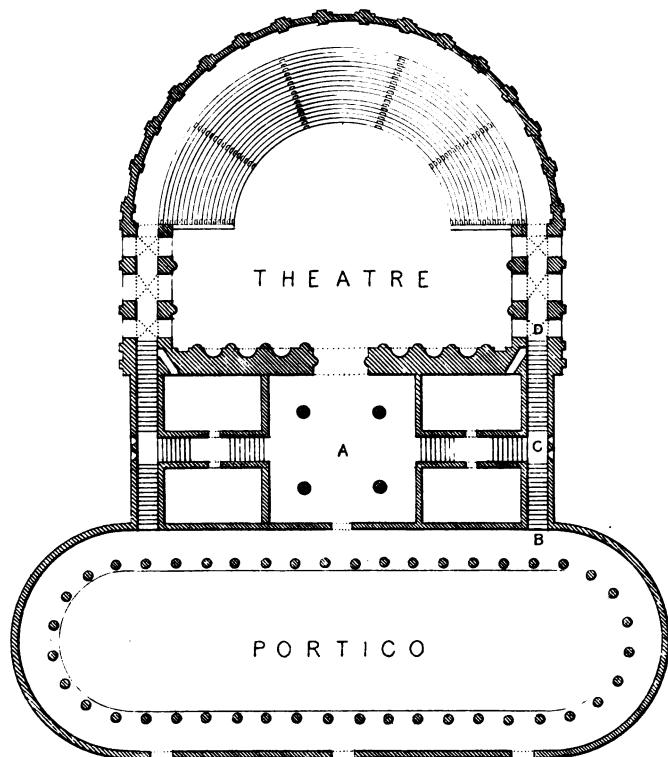
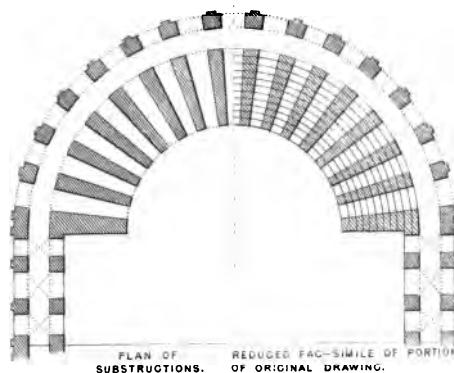
This scanty extract by Apostolo Zeno relative to the antiquities of the place is followed by a quotation at length respecting the episcopate of Chersonesus, the convent of S. Francesco, and the history of Pope Alessandro Philareto, who was a friar of that order; subjects which were more interesting to the worthy monk. We learn more particulars of the place, however, and especially of its aqueduct, from Belli's second letter:—

The city of Chersonesus was small, I should say not more than two miles in circuit: but though small it possessed an amphitheatre, a theatre, a plan of which I now send you, and many other splendid buildings. It had a port which is now destroyed, but which was formerly capable of holding thirty galleys. Strabo mentions a temple to Britomartis, and the remains of it can yet be traced. From this city to Lyttus extended an excellent and commodious road, though from the nature of the country it was far from level. The same distance was traversed by a stupendous aqueduct, which commencing at a spring in the *Lassithi* mountains, four or five miles above Lyttus, conducted the water first to that city and afterwards to Chersonesus, notwithstanding the hilly character of the intervening district. The aqueduct, which is about 14 feet in thickness, of solid masonry, and between 15 and 16 feet in height, winds round so many hills, and crosses so many valleys, that its length must be upwards of thirty miles, nearly the whole of which is perfect, and seems likely to remain so as long as the world shall last. But what causes most astonishment is the prodigious height of the arches which cross the ravines, some of which are a hundred feet in height. This is the most remarkable aqueduct in Candia, though there are several others of less grandeur and extent. (Lett. II.)

LYTTUS *sive* LYCTUS.



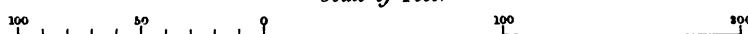
At the distance of twenty-one miles from *Candia* is *Castel*



PLAN OF THE THEATRE AT CHERSONESUS.

FROM AN ORIGINAL DRAWING BY ONORIO BELLI, 1582—1596.

Scale of Feet.



Pediadha, situated upon a lofty hill, at four or five miles from which, upon a still higher hill, are the remains of the ancient city of Lyttus, a Lacedæmonian colony. (A. Z.)

The city of Lyttus, distant from the north coast twelve or fourteen miles, was built on a hill or group of hills, four miles in circuit, with so little level ground, that it presents one of the most irregular and rugged sites ever chosen for an ancient city. But notwithstanding this disadvantage of position it possessed (temples and other, A. Z.) edifices of considerable importance; and many statues of great beauty have been found here, which are now in the possession of the Proveditor General. (Lett. II.)

Among these statues is one of a woman, habited in the Grecian manner, and another of a man in the Roman costume, of the size of life, but the head is wanting. It is of a high style of art, and is clad in armour. In the scales of the *zoma* are engraved heads of lions, elephants, women, etc. Round its neck is a collar, from which is suspended a small figure of Victory standing upon a wolf, under whose belly are two infants. One arm (of the Victory?) held a sword, the other was defended by a round shield. At the feet of the large statue kneels a naked prisoner, two feet in height, with his face looking upwards as in the act of supplication. This figure was either unfinished, or left purposely rough, perhaps on account of the height at which it was intended to be seen. This statue was sent to Venice by Alloizio Grimani, together with two other statues of less beauty. Another statue was excavated by Belli, of a sitting figure, also without head; but not being of good design, and being difficult of transport, he left it in the situation where it was discovered. The seat was rude and heavy, in front of which, beneath the feet, was the following inscription:—

NEIKIAS NEIKIOY AZINIEY AOHNA.

On the cover of a marble sarcophagus, worked over in imitation of fish-scales, is the following inscription:—

ΦΛ . ΕΛΠΙΔΙΑΝΟΣ.

This sarcophagus-lid was in the garden of Marco Fratello, a Venetian gentleman, at *Dianaidhe*, a most beautiful place, and adorned with fine cypresses.

At a short distance from Lyttus, on the road to *Pediada*, is the village of *Csida*, where was found the following inscription:—

(See Boeckh, *C. I.*, No. 2607.)

He then describes a magnificent aqueduct which led from *Pediada* to *Lassithi*. (A. Z.)

Many inscriptions are found at Lyttus, from which we learn that though, as Polybius informs us, the city was ruined by the inhabitants of Gnossus and Gortyna, it must have flourished again in the time of Trajan, Hadrian, Plotina, and Matidia (maternal aunt to the Emperor Antoninus). (Lett. II. and A. Z.)

The following inscriptions, on marble tablets, were excavated among the ruins:

(See Boeckh, Nos. 2586, 2583, 2575, 2578, 2579, 2572, 2577, and 2578.)

The following are unpublished:

ΙΡΩΤΑΡΧΟΣΑΝΔΡΟ
ΤΩΝΑΓΛΑΩΝΑΝ.

ΑΣΥΝΘΙΩΝΚΟΔΙ
ΙΕΥΝΕΝΔΙΑΛΩΤ
ΕΜΕΛΗΘΗΝΚΑΤ
ΝΤΟΝΒΩΜΟΝ
ΚΑΤΑΤΟΝΔΟΘΕ
ΝΕΚΤΩΝΤΑΣΠ
ΟΔΙΩΝΕΚΟΣΜ
ΛΟΣΚΩΜΑΣ.

(A. Z.)

Theatre.

The plan of the theatre of Lyttus is incomplete as regards the scene, the form of which, from its state of ruin, and the enormous blocks which lay about it, is difficult to be determined. Were you to see these ruins you would be filled with amazement at the extraordinary character of the people who could originate such works. This theatre is the largest which was constructed in the island. The steps are excavated out

PLAN OF THE THEATRE AT LITTUS.

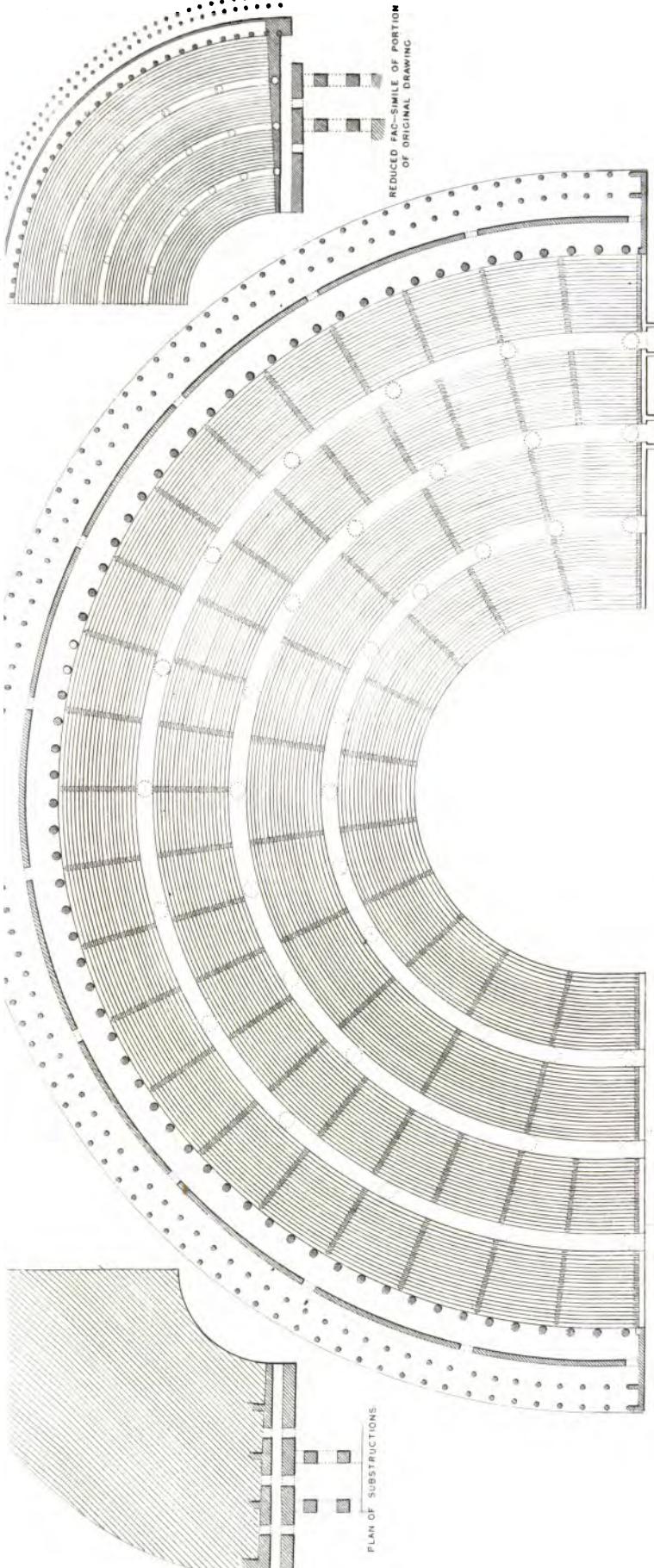
(600 FEET IN DIAMETER)

FROM AN ORIGINAL DRAWING BY ONORIO BELLI, 1582—1596.

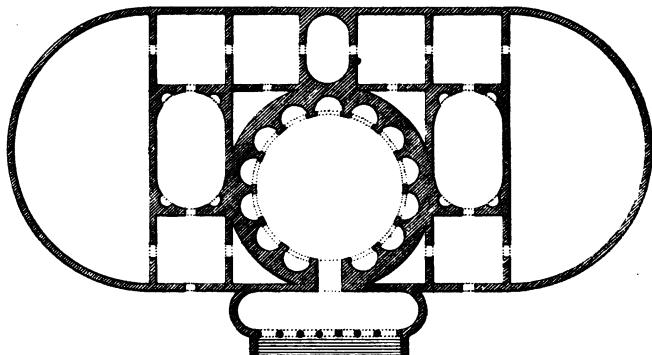
REduced Fac-Simile of Portion
of Original Drawing

PLAN OF SUBSTRUCTIONS

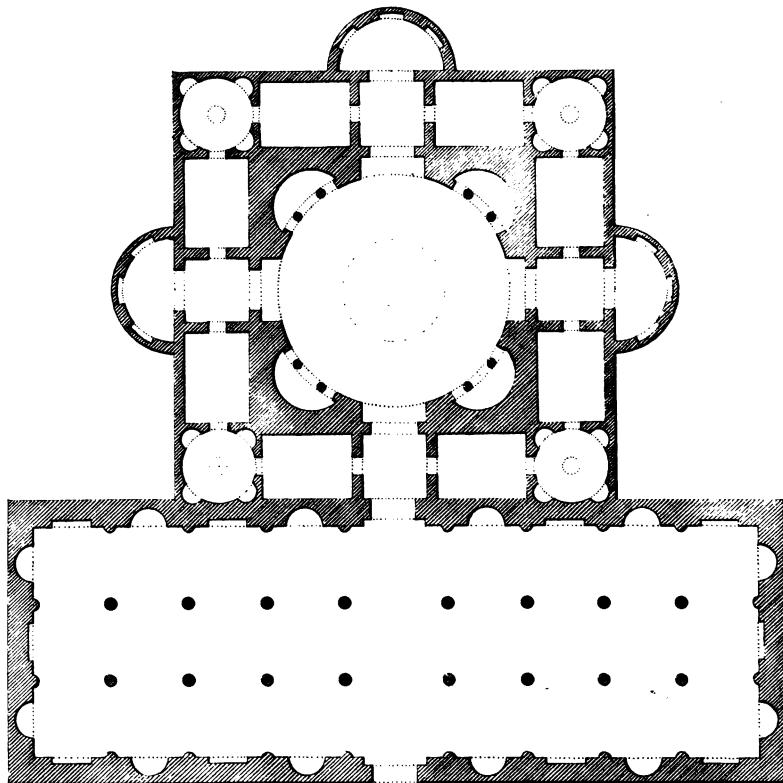
Scale of Feet.
0 100 200







AT LAPP A.

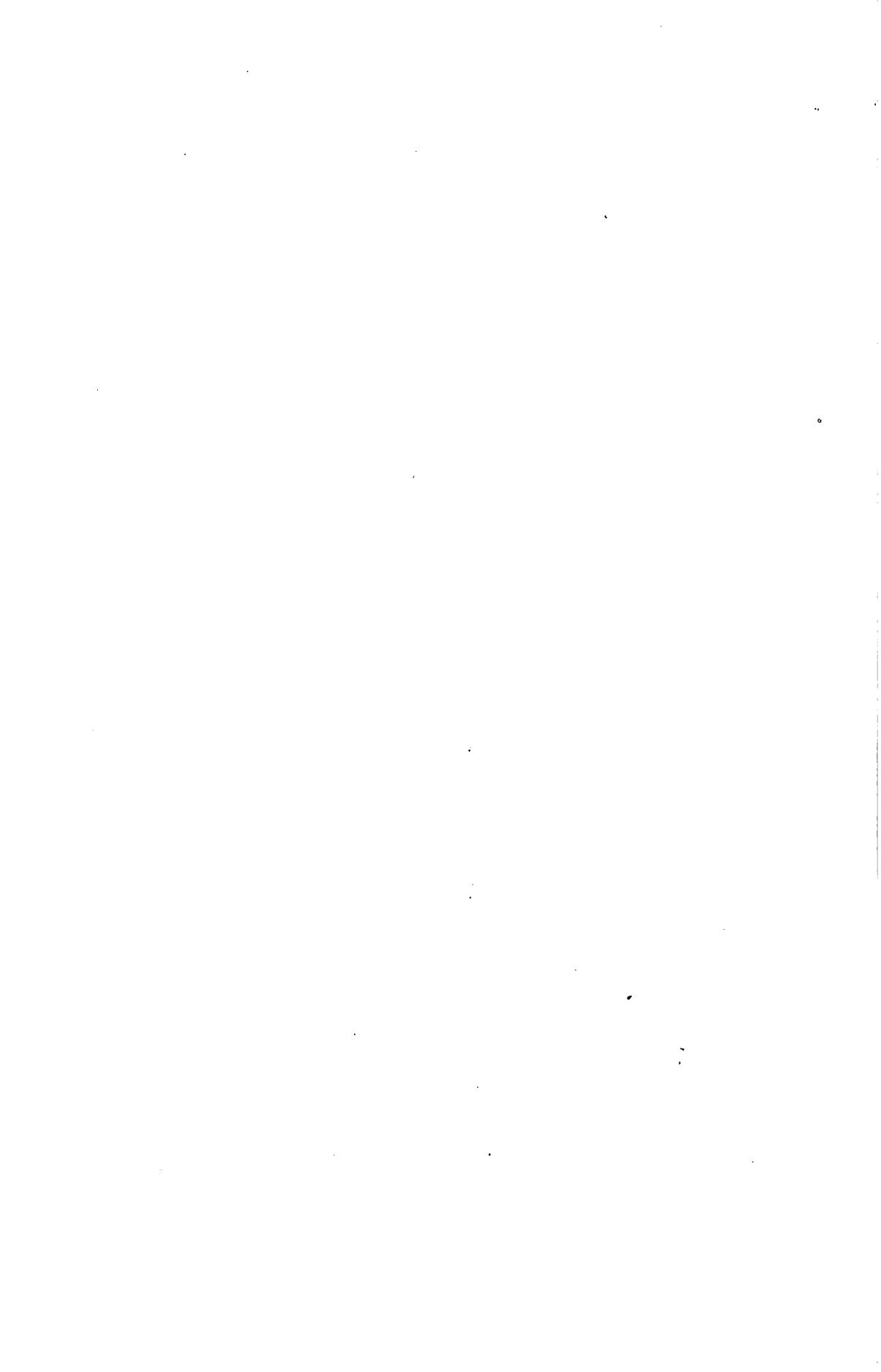


AT LEBENA.

FROM ORIGINAL DRAWINGS BY ONORIO BELLi, 1582—1596.

Scale of Feet.

300 50 9 300 200



of the mountain, composed of a soft tufa which is easily worked, and with which they cover the roofs of the houses, forming a terrazzo impermeable to the rain. This tufa is called *Lepinda*, and is found of different colours, and in great abundance.

There were three rows of brazen vases (*echeia*) in this theatre, almost all the cells for which are still visible. (Let. II.)

The following inscriptions were excavated in this theatre:—

ΕΥΦΡΟΣΥΝΑΔΗΜΙ
ΤΕΙΜΑΤΟΡΑΙΑΗΝCΠ
ΤΙΟΦΜΩΜΝΗΜΗCΧΑΙ.

The others are in Boeckh, Nos. 2600, 2603, 2609, 2580, 2606, 2610, 2611, and 2608.

(A. Z.)

Punta di Leonda (?) (LEBENA ?)

Lebena, one of the ports of Gortyna, is now called *Leada*. (Query, *Leonda*, the name and position of which agree pretty nearly with the particulars here given us.) It is twenty miles from Gortyna, twelve miles from Caloi-limenes and Lassea, and twenty-five from Matalia. The city, like most of those on the south coast, is ruined and laid waste. Four or five mud hovels are all that now exist. The harbour is destroyed, and no traces of it are remaining.* The place now serves only as a beacon station to warn the inhabitants on the approach of corsairs.

Temple of AEsculapius (?).†

The temple, a plan of which I now send you, was highly

* If, as is already stated, Belli conceived the Punta di Leonda to be the ancient Lebena, it is no wonder that he could not distinguish the remains of the harbour. It never existed here.

† It is difficult to imagine this building to have been a temple. It seems more to resemble a bath. The plan of the central portion is extremely beautiful.

ornamented. The columns were of a granite resembling that of the two columns of the Piazza di Venezia. Many of them are yet remaining, but injured by fire. I think this temple may have been dedicated to *Æsculapius*, for in a square panel I found sculptured a serpent of considerable size, and Pausanias, moreover, in his description of the territory of Corinth, says that the temple of *Æsculapius* at Lebena, in Candia, was built in imitation of that at Cyrene. (Lett. II.)

LASSEA *seu* THALASSA. (LISEA ?)

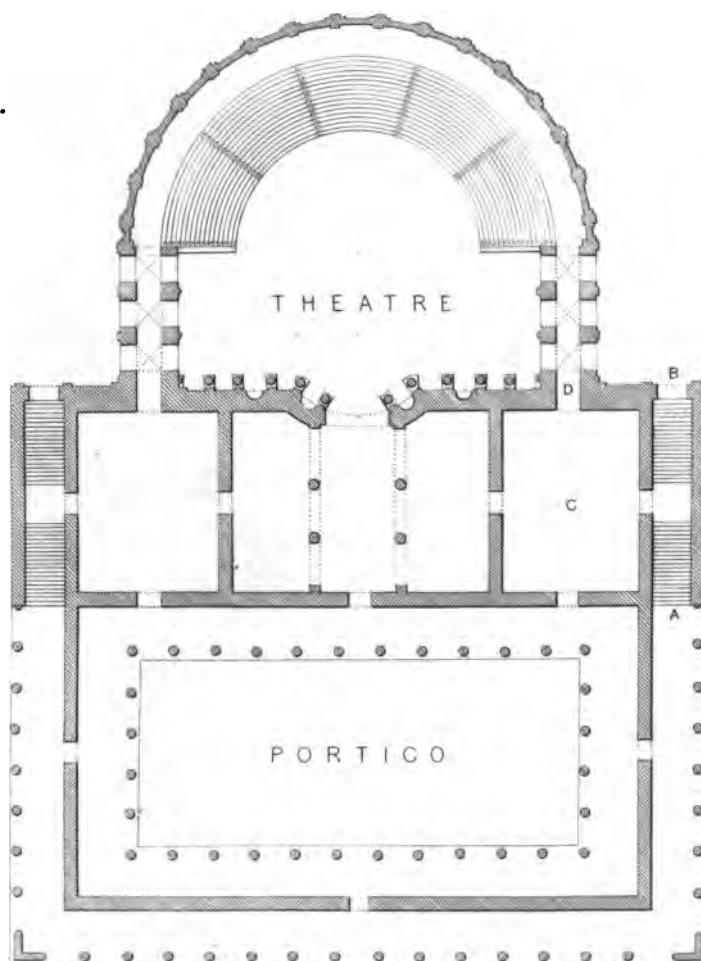
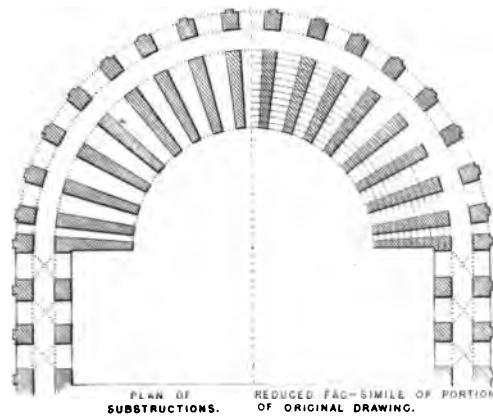
Lassea still retains its name, but it is quite deserted. The nearest habitation is four or five miles off, where is a monastery of Caloyers, called *Pesonesso*, in a most beautiful and enchanting position. These Caloyers have a rental of upwards of 2000 ducats: they are courteous and kind. They have the best wine in the island. (Lett. II.)

GORTYNA.



This city lay in a plain at the foot of a mountain: its circumference was certainly equal to ten miles. Close by it runs the river *Lethæus*, celebrated as the scene of the rape of Europa. The famous plantain tree, which never lost its leaves, no longer exists. Remains may be traced of two theatres, an amphitheatre, a circus, baths, temples, fora, basilicas, aqueducts, cisterns, besides ruins of other edifices and fragments of most noble columns. Of these objects Belli took plans of the theatres, the amphitheatre, and the baths.* In the centre was

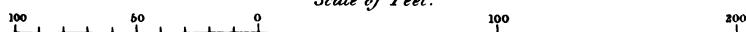
* The two latter are lost.



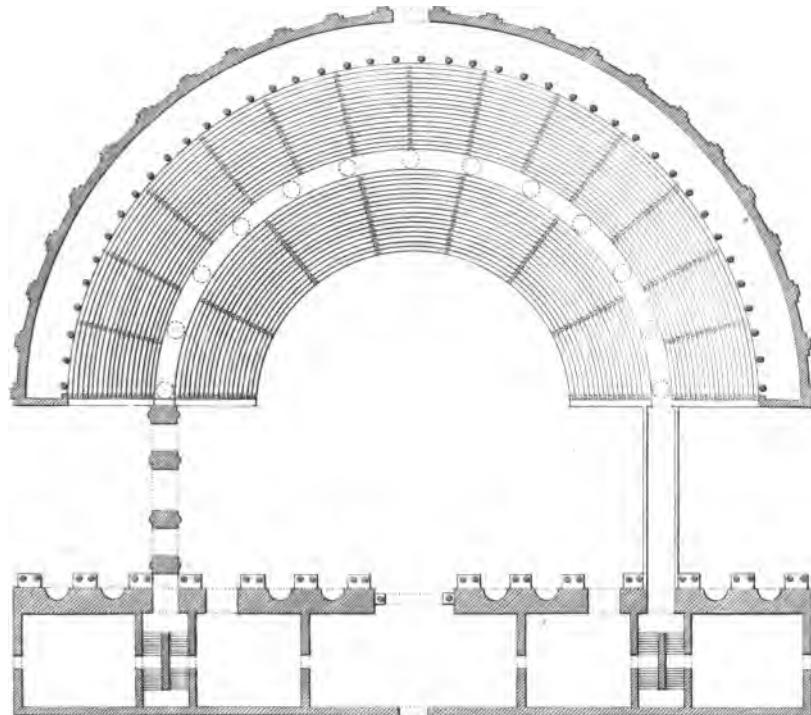
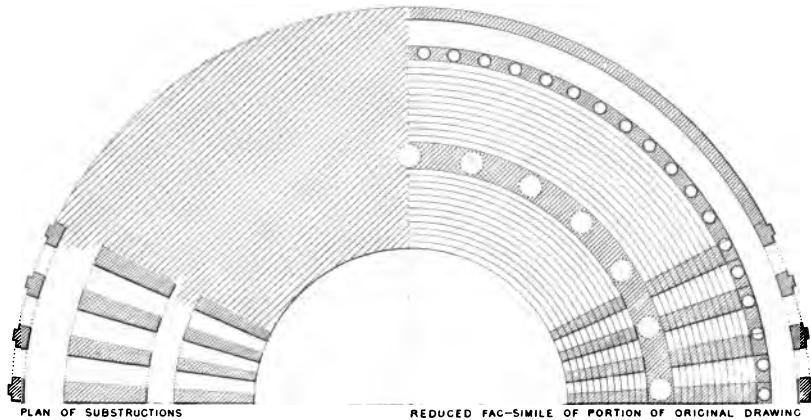
PLAN OF THE SMALLER THEATRE AT CORTYNA.

FROM AN ORIGINAL DRAWING BY ONORIO BELLI, 1582-1596.

Scale of Feet.



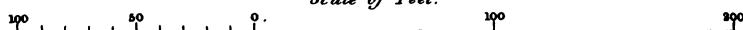


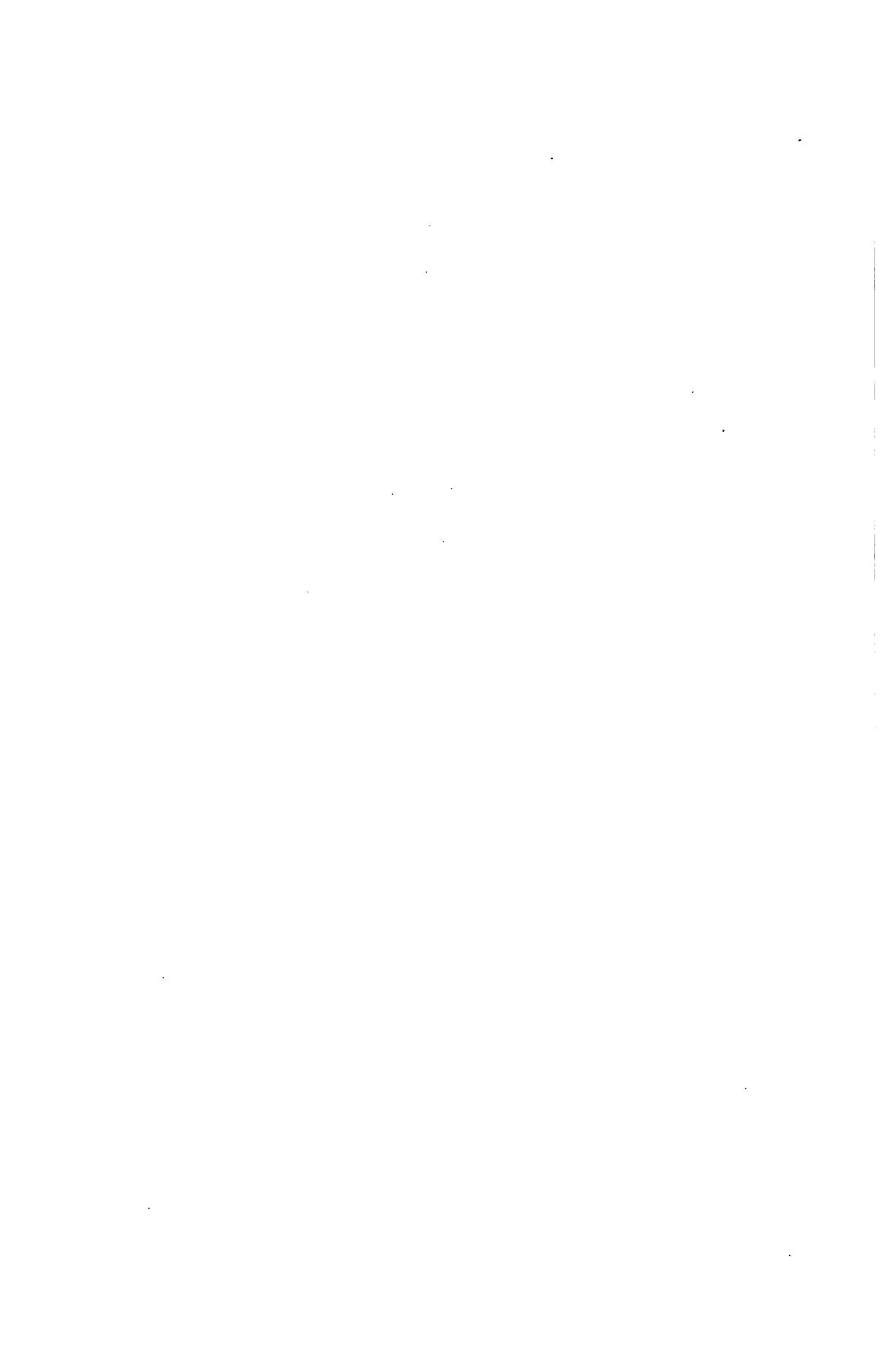


PLAN OF THE LARGER THEATRE AT CORTYNA.

FROM AN ORIGINAL DRAWING BY ONORIO BELLI, 1582—1596.

Scale of Feet.





the temple of Apollo, of the Ionic order, and of most beautiful design. The temple of Diana may also be traced. (A. Z.)

The Smaller Theatre.

The small theatre of Gortyna was also* of the Doric (Ionic ?) order. The columns were of white and black marble, and (the walls) inlaid with different coloured marbles. The columns behind the theatre were of granite. (Lett. I.)

The Larger Theatre.

The seats of this theatre, which is much larger than the other, are cut out of the mountain. The extremities are strengthened by four solid buttresses on each side, between which were stairs giving access to the upper præcincts. The scene appears to have been composed of five orders, one above another, each adorned with columns. In the postscenium appeared the following inscription, let into a small stone:—

JULIAE AUG.

But Belli considered that the stone might have been brought from some other building, and built in without consideration. (A. Z.)

The great theatre had a most beautiful scene, adorned with the most precious marbles; the columns are of the whitest marble, 16 feet in height (17 feet $10\frac{1}{2}$ ins. Eng.) and 1 foot 7 ins. (1 foot 9 ins. Eng.) in diameter. There are no remains of a portico behind the scene; but, what is very remarkable, the river Lethæus runs immediately behind the postscenium, the whole of which is arched over to the extent of two hundred paces, thus forming a terrace for the hospitalia and other portions of the scene. This arch is unbroken, being formed of large stones put together without mortar. I explored the whole length of tunnel in the hope of finding some inscription, but without result. (Lett. I.)

* The Doric order is not previously referred to.

Basilica.

Among the ruins of the Basilica, near the Forum, Belli found the following inscriptions. (In front of the building) were two large statues on pedestals, but the statues are now lost.

(These inscriptions have already been given in the former portion of this paper.)

(A. Z.)

Amphitheatre.

(A plan of this building was given in Belli's work, but is now lost.*)

The amphitheatre of Gortyna was a work of great solidity and grandeur, but the walls are of brick and stone roughly set together, without any embellishment on the external face.† It would appear that the seats were of terra-cotta, for not one is to be seen of stone.‡ The stairs are arranged as in the amphitheatre at Verona; the external arcades appear to have been double, (in two orders,) and from the numerous fragments of columns in the area, it is probable that a superior portico ran round the top. In the middle of the height was a præcinctio, dividing the steps into two nearly equal sections. At present the building is greatly ruined by injury and the action of fire, and this state of ruin is continually increasing, for the inha-

* We find the following remarks on Belli's plan and description in Maffei's *History of Amphitheatres*: "The amphitheatre at Gortyna he represents, as is usual, by a plan entirely like that of the Colosseum at Rome, and by a double portico, and in the four diametrical entrances, though all the arches were, as he says, but fifty-six. He adds that the fabric was of brick, without any ornament of architecture, which particular can scarcely be believed of an amphitheatre, especially in a country where the public edifices were of stone, and ornamented too." (See note †.) "He adds, that this structure was joined to the Forum of the city, whereas the amphitheatres were always without the walls."—Gordon's *Translation*, p. 82.

† It is probable that the walls were ashlar'd with stone, which has since been removed.

‡ With equal justice he might suppose the Colosseum at Rome to have had no stone seats.

bitants destroy the walls for the sake of the materials: nevertheless, even as it is, it excites wonder in the soul of the beholder. The internal area is 112 by 150 feet. The inhabitants have no idea of its ancient use. The stone of which the building is composed is very soft, and was probably quarried in the so-called Labyrinth. *(Id.)*

Stadium.

Belli then speaks of the circus, and calls it one of the most beautiful buildings he had beheld, although possessing but little ornament, and constructed of soft stone. *(Id.)*

Thermæ.

(A plan of this building was given in Belli's work, but is now lost.)

He then describes the Thermæ, a building of great magnificence and solidity, and which was then in a good state of preservation. *(Id.)*

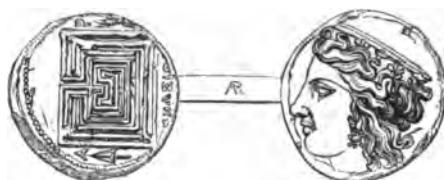
Church of S. Titus.

A plan of this church is given by Belli,* (whose remarks, being relative to a sacred building, are quoted at length by Apostolo Zeno.) This was the church of the martyrdom of S. Titus. It was built entirely of squared stone from ancient buildings, without brick. Its construction is remarkably solid, and its walls are perfect, but the roof has fallen.† (A) is a sacristy, in which and in (B) is built a small chapel, in which mass is occasionally performed by Greek priests from the hamlet Metropolis. The building was plain, without ornaments or columns. The cupola was supported by four pilasters, giving the plan the form of a cross. All decorations, if it had any, are now destroyed. *(Id.)*

* But is now lost.

† See the former article, *Mus. Class. Antiq.*, vol. ii., p. 281.

GNOSSUS.



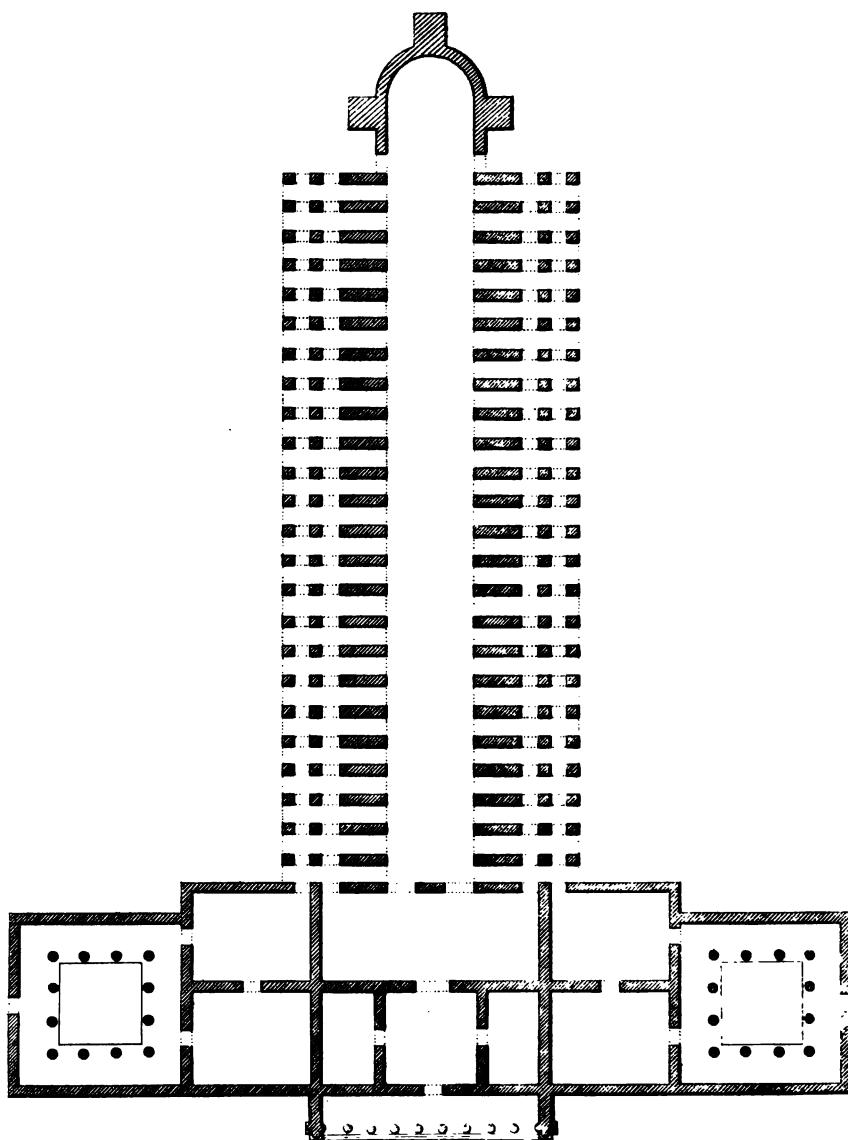
At about equal distance from *Candia* and Mount Juctas, being about three miles from each, are the ruins of this city, which was founded by King Minos in a plain almost entirely surrounded by mountains, in the manner of a theatre. The hills upon which the city was built are of low elevation, and the walls may be four miles in circumference. Homer distinguishes this city as great and noble. It is now almost wholly destroyed, and none of its buildings are remaining entire. Several large masses of walling exist in different places, built of stone, but much decayed. The foundations of a theatre or other building, of great size, are visible, but it is not easy to determine its plan.* From time to time have been found many fine statues, which were sent to Venice by different Proveditori, and among these Jacopo Foscarini sent over many fine and perfect statues. Strabo says it was called anciently Cæratus, from the river which flowed beneath it, but Polybius describes Cæratus as a different city. Belli found no remains of the famous labyrinth contrived by Dædalus; which is not astonishing, for Pliny says there were no remains of it in his time. It is probable, however, as we learn from Plutarch, that the labyrinth signified merely a place of great strength, from which it was very difficult for prisoners to escape.

(A. Z.)

OAXUS.

The site of this city is described by Belli as eighteen miles south of *Milopotamo*, and thirty-six from *Rettimo*, and lying

* It is impossible to say what the building is, but it resembles a circus more than a theatre.

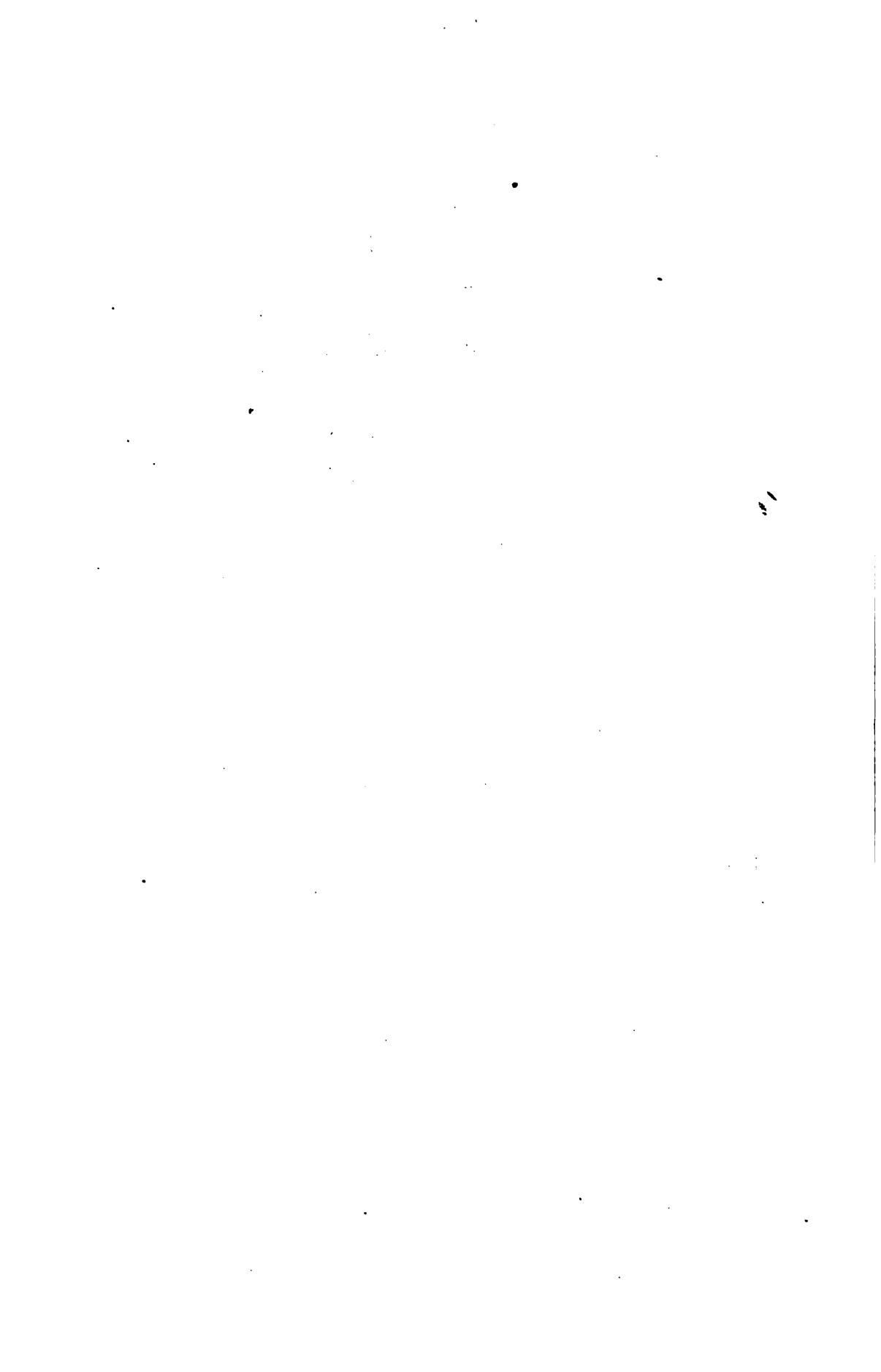


MONUMENT AT GNOSSUS.

FROM AN ORIGINAL DRAWING BY ONORIO BELLI. 1582—1596.

Scale of Feet.





beneath Mount Ida. It is mentioned by Herodotus and Stephanus. There are the remains of a temple. (A. Z.)

LAPPA *sive* LAMPA.

The ruins of Lappa may be seen sixteen miles west-south-west of *Rettimo*, from the north coast six miles, and from *Adramito*, on the river Musella, eight miles. It was founded by Agamemnon, and occupies a most beautiful position on a hill. There still remains a temple* in very good preservation, in excavating near which Belli discovered the following inscription on the base of a statue:—

(See Boeckh, *C. I.*, No. 2584.)

The following is unpublished:—

ΦΛΑΟΥΙΟΝ
ΙΥΤΩΝΑΘ
... ΔΙΑΝΟΝ
... ΝΗΣΕΣ
... ΚΕΝΚΑΕ
ΤΟΙΣΤΟΝΓΟ
... ΙΕΩΝΑΥΤΟΙ
ΚΑΔΟΚΑΓΑΘΙΑ.

There are also the remains of another temple, and those of a bath. (A. Z.)

RHITHYMNA.

Forty-five miles east of *Canea*, on the north coast, is the city of *Rettimo*, the ancient Rhithymna, at the commencement of a plain, about one mile distant from a stony and sterile mountain. The city was very pleasant till the Turkish armament, under Allazzaly, sacked and destroyed it in 1571. Upon a hill in its vicinity are the remains of a square temple, some of the columns of the portico of which, and one of the alæ or sides of the temple, are extant. (A. Z.)

* It is evident by what Belli says of the temple at Lebena that the accompanying plan is the temple here spoken of. This building, also, might be taken for a bath, with a sphæristerium on each side.

HIPPOCORONIUM.

Twenty-eight (?) miles north of Amphimale, an important city as proved by its ruins, towards Cape Drepanum, and outside the port of *Suda*, is *Castel Apicorno*, which I consider to be Minoa, although Hippocoronium is mentioned by Strabo. Its situation is very beautiful, being placed on a hill of moderate elevation, overlooking the coast. It was then entirely ruined: the Turkish fleet, commanded by Allazzaly, entered the port without opposition in 1571, and razed the foundations of this castle and all the surrounding villages. It is now restored, but without exhibiting any traces of antiquity. (A. Z.)

POLYRRHENIA.



Aptera (Polyrrhenia) was situate five miles south of Cisamus, on a hill of no great altitude, but steep and rugged. It is now called *Paleocastro*. Some of its towers and walls are remaining, but there are no other vestiges of its ancient grandeur. (A. Z.)

CISAMUS.

This city (which Belli supposed to be the port of Aptera, and) whose name is preserved in the modern *Castel di Chisamo*, possessed a very fine artificial harbour, of great size, and secure from all winds. It is now quite destroyed.* It had a theatre and an amphitheatre, now also destroyed. (A. Z.)

* Capt. Spratt has recently discovered the walls of the port, now on dry land upwards of twenty feet above the water. See note, p. 15.

ELYRUS.

(Belli identifies the site of this city at *Rhodovani*, but in the further description of it he seems to confuse it with some city on the northern coast. He says :—)

It was between the *Casal Lornico* and the *Casal Piscopi*, about twenty miles west of *Canea*, eight miles north-west from *Palasarna*, and within five miles from the north coast, and less than that distance from the Gulf of *Cisamus*. Though ruined, antiquities are found here every day, and several tombs have been discovered. (A. Z.)

CYDONIA.



The site of Cydonia is occupied by the modern city of *Canea*. Its theatre existed till 1585, when it was destroyed in order to furnish materials for a fortress. Belli's work contains a plan of it, which was taken before its destruction. An aqueduct was connected with the city, in excavating near which Belli discovered many coins of Gordian and Maximinus, and some marble heads, among which was a very fine one of Antinous, which came into the possession of Vicenzo da Canale, who was then proveditor of the cavalry of the island. It contained also a temple with a Doric portico.

In the neighbourhood of *Castel Cisamo* are the remains of *Polyrrhenia*, *Phalasarna*, *Aptera*, *Cisamus*, and the *Porto-Bianco*.

(A. Z.)

NOTE.

IT will be seen by the quotations from Maffei (p. 9) that Belli's work contained plans of seven theatres and two amphitheatres. Of these, six out of the seven plans of theatres are fortunately preserved to us. The other theatre, of which the plan is lost, is that of Cydonia, which is the more to be regretted as the theatre was demolished shortly afterwards to furnish materials for a fortress. The two plans of amphitheatres were those of Gortyna and Hieraptyna; the other amphitheatres, the remains of which were not sufficiently entire to allow of his taking plans, were those of Chersonesus and Cisamus. Two sets of these plans are preserved in the *Ambrosiana*: one set is more carelessly drawn than the other; the columns especially are either disproportionately large or small. These are probably the drawings sent over by Belli to his uncle, and of which he says in his second letter: "The drawings which I now send you have been executed in a great hurry, and both ink and paper have ruined me; but those in my book are drawn with care. I send them you, however, merely to give you an idea of these monuments."

The three smaller theatres, of Hieraptyna, Gortyna, and Chersonesus, are built on a plain, the others on the slopes of hills. The scalæ are conjectural; they not being shown at all by Belli, who has indeed sufficiently confused his plan by endeavouring to represent the seats of the theatre and the substructive walls on the same plan. I have in every case given a fac-simile of one half of the cavea of the original plan as my authority; the only alteration in the other parts being the enlarging or diminishing the size of the columns, etc., in accordance with Belli's own instructions.

Belli is accused by Maffei of restoring the plans "according to the custom of those times," that is in the manner practised by Palladio, who restored all such parts for which he considered he had any authority, and which were wanted in order to complete the plan. The appearance of the plans will not warrant our wholly acquitting him of this charge, lawful though it might be regarded; yet, on the other hand, the plans themselves, by their variety of detail, bear evidence of considerable faithfulness. More especially is this

observable in the case of Lyctus, where, from the importance and grandeur of the theatre, there was a temptation to make the scene and portico at back of corresponding magnificence to those of the other theatres. But here we find Belli expressly declaring—"the form of the scene is shown incomplete in consequence of its state of ruin, and from the difficulty of determining it by reason of the enormous blocks which lay about it." Again, the extent of the stage is shown in any one of the plans, and there would have been a temptation to have restored the pulpitum and other features; but we may presume that the reason of his not having done so was that the traces of these portions had already disappeared. We may therefore consider that though the plans are restored so as to give as complete an idea as possible of the original arrangement, yet that no part is so represented without the authority either of existing constructions or corresponding portions, from the appearance of the remains, or from other presumptive evidence; and we know that Belli "used great care in making the plans, having abundant time and means for so doing."*

One of the first features which we remark in these theatres is the grandeur and variety of the porticos behind the scene. None of the theatres appear to have been without this appendage. That of Lyctus, as we have seen, is destroyed; and though no such portico appears to the larger theatre of Gortyna, we are told that the postscenium of this theatre abutted immediately on the river Lethæus, which was vaulted over the whole width of the theatre: and it is therefore extremely probable that this was done in order to provide some such portico, or perhaps to afford room for the erection of seats from whence to regard the naumachia, which is said to have existed in this city, and which probably was situated near to the theatre. The portico of the smaller theatre of Hierapytna is remarkable in having a double colonnade on one side; the smaller theatre of Gortyna in having an internal and an external colonnade; and the theatre of Chersonesus, in having semicircular ends, which give it a perfectly unique character.

If Belli be right in his restoration of the double colonnade on the outside of the gallery round the cavea, this handsome appendage to the theatre might have served instead of, or as an adjunct to the portico behind the scene, and afforded shelter to the inhabitants in showery weather.

The next remarkable feature is the great depth of the chambers of the postscenium, the usual proportion in other theatres being that observable in the larger theatre of Gortyna. In the theatre of Chersonesus, and in the smaller theatre of Gortyna, we find the central hall ornamented with four columns; but these are eclipsed by the larger theatre at Hierapytna, which has a grove of twelve columns. This feature of columns in the postscenium does not occur in any theatres but these of Crete.

* Belli's *first* letter.

The next peculiarity is in the position of the staircases. When the theatre was of small size, and built on a plain, access was given to the upper seats by means of the radiating lines of scalæ starting from the ground or lowest seat: when built on a hill, access was given to the central rows of seats by the same scalæ, either from the top or bottom. But in the larger theatre it became necessary to provide stairs, at regular distances, under the seats communicating with the several præcincts by dormers and bulk-heads, which, unless ornamented, must have interfered greatly with the beauty and regularity of the lines. In these theatres, however, we find a totally different system adopted. The spectators, instead of interfering with the orchestra, passed to their seats, after lounging in the portico, by means of stairs leading up to the upper floors of the postscenium, from which they passed by bridges immediately on to the præcinct. Senators, patricians, and other persons of dignity, were possibly permitted to pass through the hall, at least in the theatre of Chersonesus, which would account for the ornamental character of these chambers. In the theatre at Lyctus, which from its immense size had three præcincts, in addition to the upper gallery or portico we find two such bridges on either side: the stairs consequently must have been continued to the second story of the postscenium, in order to give access to this second bridge. These corridors of communication, with persons continually passing and repassing, must have produced a picturesque effect as viewed from the cavea of the theatre. In the smaller theatre at Hierapytna the spectators entered from the portico into the chamber (A,) from which they ascended by stairs to the ante-room (B,) and from this latter they passed directly to the upper portico or præcinct (D) of the theatre. Those coming from the other parts of the city would ascend to the same rooms by means of the external stairs at (C.) In the larger theatre at Hierapytna, and in the smaller theatre at Gortyna, the stairs are external, but approached in the same manner from opposite directions (A and B,) and leading to the room (C) on a level with the bridge (D.) In the larger theatre of Gortyna the stairs are placed in a line with the bridge, without entailing the necessity of passing through any of the rooms, while in the theatre at Chersonesus, as already seen, the spectators ascended from the aula regia (A) and the portico (B,) meeting together on the landing (C,) from which by another flight they reached the præcinct (D.)

We have now entered the theatre, and we observe other peculiarities in its arrangement. Though the plan of the cavea in all the theatres is of Roman disposition, we find two, the larger theatres of Hierapytna and Gortyna, partially arranged in the Greek manner, *i.e.* the ends of the scene are open to the country, and not closed in as in the Roman theatre generally. The continuation of the façade, with its columns and niches, beyond the natural limit of the scene, is also remarkable in these theatres. In these examples, and perhaps in that of Lyctus, the communication with the cavea was by means of bridges,

but in the other theatres of Hierapytna and Gortyna, and in that of Chersonesus, the communication was by corridors arched over and continuing up to the summit of the building. Most of these theatres have a large recess, square or circular, in the middle of the scene, as in the Roman manner, and doubtless elaborately ornamented.*

The most remarkable feature, however, in these plans remains yet to be described. In three of these theatres we have one row, and in that of Lyctus three rows, of thirteen cells, for the harmonic vases:† and, lest we should imagine that these vases are conjectural, we are distinctly told that the cells are clearly visible. On the plan of the large theatre at Gortyna appear these words: "Haveva tredici vasi di rame posti nelle sue celle che si vedono benissimo:" and Belli adds that the common people call them ovens,—while in the description of that of Lyctus he says of the brazen vases, that almost all the cells are still visible. It will be seen that the number here shown (thirteen) is that given by Vitruvius, and therefore the examples before us are of the highest

* This feature of the Roman theatre gave it a great advantage over the Greek in an acoustic point of view, the voices of the actors, who were always few in number, being projected by the form of the niche to all portions of the cavea.

† "The brazen vases of theatres were determined by mathematical rules, according to the size of the theatre; being so formed that when struck they should give out the sounds of the fourth, fifth, and so on up to the octave. Cells being then formed under the seats of the theatre, the vases are placed there according to musical order, and so fixed that they should be free on all sides. Their position is inverted, and they are supported in front by a small wedge, half a foot in height; the front of the cells having an aperture in the plinth of the lower seats two feet in length and half a foot in height." The vases are placed in order according to the musical value of the note...."if the theatre is not of great size they are placed in a line at half the height (of the cavea,) dividing the line in twelve equal parts, thus giving the position of thirteen vases....By this arrangement the voice, proceeding from the scene, expands itself in all directions as from a centre, and by contact with the hollow of the several vases obtains greater clearness and harmony.

"But if the size of the theatre be more considerable, the height (of the cavea) is then divided into four parts, so as to give three lines of cells, the first or lowest of which is for the harmonic tones, the second for the chromatic, and the third for the diatonic....

"Many experienced architects, who have had occasion to build theatres in small towns, have, for want of means, employed fictile vases of harmonic value, and distributing them in the abovementioned manner, have obtained the most complete success."—Vitr., *De Archit.*, v, 5.

interest as confirming the statement of the father of architecture relative to these evidences of the exquisite delicacy of perception of the ancient Greeks.

EDWARD FALKENER.



RHAUCUS.



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X

